

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

PARITY NETWORKS LLC,

Plaintiff,

v.

BUFFALO AMERICAS, INC.,

Defendant.

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CIVIL ACTION NO. 6:21-cv-00357

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT

Plaintiff Parity Networks LLC (“Plaintiff” or “Parity Networks”), by and through its attorneys, for its Original Complaint against Buffalo Americas, Inc. (“Defendant”), and demanding trial by jury, hereby alleges as follows:

I. NATURE OF THE ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 271, *et seq.*, to enjoin and obtain damages resulting from Defendant’s unauthorized use, sale, and offer to sell in the United States of products, methods, processes, services and/or systems that infringe Parity Networks’ United States patents, as described herein.

2. Defendant manufactures, provides, uses, sells, offers for sale, imports, and/or distributes infringing products and services; and encourages others to use its products and services in an infringing manner, including their customers, as set forth herein.

3. Parity Networks seeks past and future damages and prejudgment and post-judgment interest for Defendant’s past infringement of the Patents-in-Suit, as defined below.

II. PARTIES

4. Plaintiff Parity Networks is a limited liability company organized and existing under the laws of the State of Texas.

5. On information and belief, Defendant is a corporation organized under the laws of Delaware, with a place of business located at 11130 Jollyville Road, Suite 205, Austin, Texas 78759. Defendant's registered agent for service of process in Texas is CT Corporation System, 1999 Bryan St., Suite 900, Dallas, Texas 75201.

III. JURISDICTION AND VENUE

6. This is an action for patent infringement arising under the Patent Laws of the United States, in particular 35 U.S.C. §271, 281, 283, 284, and 285. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §1331 and 1338(a).

7. Upon information and belief, Defendant transacts substantial business in the State of Texas and the Eastern District of Texas. Defendant, directly in its office in Plano, Texas, and through subsidiaries or intermediaries (including distributors, retailers, resellers and others), has purposefully and voluntarily placed one or more of their infringing products, as described below, into the stream of commerce with the expectation that these infringing products will be purchased and used by customers in the District. Defendant has committed acts of patent infringement within the District.

8. This Court has personal jurisdiction over Defendant because it has committed acts giving rise to this action within Texas and within this District. The Court's exercise of jurisdiction over Defendant would not offend traditional notions of fair play and substantial justice because Defendant has established minimum contacts with the forum with respect to both general and specific jurisdiction.

9. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) and 28 U.S.C. § 1391(b) because Defendant resides here, because Defendant has committed acts of infringement in this judicial district, and because Defendant maintains one or more regularly established places of business in this judicial district.

IV. FACTUAL ALLEGATIONS

PATENTS-IN-SUIT

10. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,103,046 (the “’046 Patent,” attached as **Exhibit 1**), entitled “Method and Apparatus for Intelligent Sorting and Process Determination of Data Packets Destined to a Central Processing Unit of a Router or Server on a Data Packet Network,” issued on September 5, 2006.

11. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,107,352 (the “’352 Patent,” attached as **Exhibit 2**), entitled “Virtual Egress Packet Classification at Ingress,” issued on September 12, 2006.

12. Together, the foregoing patents are referred to herein as the “Patents-in-Suit.” Parity Networks is the assignee of the Patents-in-Suit and has all rights to sue for infringement and collect past and future damages for the infringement thereof.

DEFENDANT’S ACTS

13. Defendant is a provider of data networking products and solutions and provides hardware and software directed to switching and routing network data to its customers in the United States, including in this District. Defendant provides a variety of networking switches.

14. On information and belief, Defendant designs, develops, supports and coordinates the importation into the United States of the exemplary accused products set forth below.

NOTICE

15. Defendant had knowledge of the Patents-in-Suit and the infringing conduct as early as the date when Parity Networks effected service of the Original Complaint.

V. COUNTS OF PATENT INFRINGEMENT

COUNT ONE
INFRINGEMENT OF U.S. PATENT NO. 7,103,046

16. Parity Networks incorporates by reference its allegations in the preceding paragraphs as if fully restated in this paragraph.

17. Parity Networks is the assignee and owner of all right, title and interest to the '046 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

18. On December 22, 2020, certain claims of the '046 Patent were ruled indefinite by the U.S. District Court for the Central District of California.¹ *See Parity Networks v. Edgecore USA Corp. et al.*, Civ. No. SACV 20-699JVS, in the U.S. District Court for the Central District of California at Doc. No. 51 (the "Edgecore Case"). The Edgecore Case is still pending and the indefiniteness ruling is subject to Parity Networks' appeal. Subsequently, on January 13, 2021, the Court in the Western District of Texas, Waco Division ruled those same claims as not indefinite. *See Parity Networks, LLC v. D-Link Corp.*, W-20-CV-00093-ADA, in the U.S. District Court for the Western District of the United States, Waco Division at Doc. No. 41.

19. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently

¹ *See also Parity Networks, LLC v. ZyXEL Communications, Inc.*, Civ. No. SACV 20-697JVS, in the U.S. District Court for the Central District of California; *Parity Networks, LLC v. Moxa Inc. et al.*, Civ. No. SACV 20-698JVS, in the U.S. District Court for the Central District of California.

directly infringing each and every element of at least claim 1 of the '046 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '046 Patent. Defendant is thus liable for direct infringement of the '046 Patent pursuant to 35 U.S.C. § 271(a).

20. Exemplary infringing products include Defendant's BS-GSP Series Switches (BS-GS2008P, BS-GS2016P, BS-GS2024P), BS-GS Series Switches (BS-GS2008, BS-GS2016, BS-GS2024, BS-GS2048), and all associated computer hardware, software and digital content, and all products operating in a substantially similar manner ("'046 Exemplary Infringing Products"). The '046 Exemplary Infringing Products include one or more packet processors that categorize packets into categories based on the source of the packet and the packets are placed in a queue and processed by a CPU based on a priority of those categories.

21. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently indirectly infringing each and every element of at least claim 1 of the '046 Patent, including actively inducing infringement of the '046 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Defendant knows or should know infringe one or more claims of the '046 Patent. Defendant instructs and encourages customers to make and use the patented inventions of the '046 Patent by operating Defendant's products in accordance with Defendant's specifications. Defendant specifically intends its customers to infringe by, among others, designing and fabricating its switches to utilize one or more packet processors that categorize packets into categories based on the source of the packet, place the packets into queues, and process the packets via a CPU based on a priority of those categories.

22. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently indirectly infringing each and every element of at least claim 1 of the '046 Patent, including contributory infringement of the '046 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. Defendant knows that the infringing products (i) constitute a material part of the inventions claimed in the '046 Patent; (ii) are especially made or adapted to infringe the '046 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in its switches to utilize one or more packet processors that categorize packets into categories based on the source of the packet, place the packets into queues, and process the packets via a CPU based on a priority of those categories.

23. Defendant instructs and encourages its customers to make and use the patented inventions of the '046 Patent by operating the Quality of Service (QoS) and CoS software components of its products in accordance with its instructions and specifications. Defendant specifically intends its customers to infringe by implementing QoS software modules with the ability to set particular priorities for different applications, users, or data flows. QoS involves elements of classification, marking, and queuing.

24. Defendant instructs and encourages its customers to configure and use QoS and CoS services. For example:

QoS Settings

Configure the priority.

QoS Settings

QoS
☐ Enable
Show Detail

Schedule Method WRR ▼

Priority Type

☐ DSCP

☒ CoS

☐ IP Precedence

Apply

Buffalo Americas BS-GS20P Series Switches User Manual, Page 39.

QoS	Check to enable QoS. Click <i>Show Detail</i> to enable/disable QoS for each port.
Schedule Method	Configure the queue scheduling type. Strict Execute the queue scheduling based on strict priority. High-prioritized queues are always forwarded strictly; low-prioritized queue will never be forwarded if any data remains in the high prioritized queue. WRR Execute the queue scheduling based on WRR (Weighted Round Robin). This will forward queues in order of a round robin; even lower priority queues will be forwarded at a constant rate. The priority can be specified from 0 (lowest) to 7 (highest). Note: Packets without VLAN tag will belong to the lowest priority queue.
Priority Type	Select a priority parameter from DSCP, CoS, and IP precedence.

Buffalo Americas BS-GS20P Series Switches User Manual, Page 39.

QoS Mapping

Configure port-based priority for DSCP, CoS, and IP precedence.

Port Priority

Port	Priority
1	0: Lowest ▼
2	0: Lowest ▼
3	0: Lowest ▼
4	0: Lowest ▼
5	0: Lowest ▼
6	0: Lowest ▼
7	0: Lowest ▼

Buffalo Americas BS-GS20P Series Switches User Manual, Page 40.

CoS Mapping	
CoS Value	Priority
0	2 ▼
1	0: Lowest ▼
2	1 ▼
3	3 ▼
4	4 ▼
5	5 ▼
6	6 ▼
7	7: Highest ▼

Buffalo Americas BS-GS20P Series Switches User Manual, Page 40.

Port Priority	Configure the priority of each port.
DSCP Mapping	Configure the DSCP priority value from 0-63.
CoS Mapping	Configure the CoS priority value from 0-7.
IP Precedence Mapping	Configure the IP precedence priority value from 0-7.
Priority	Configure the priority from 0-7.

Buffalo Americas BS-GS20P Series Switches User Manual, Page 40.

25. Defendant further instructs and encourages its customers use queues to prioritize the packets to be processed by the CPU.

DiffServ Policy	Profile Action Processes the frames and packets depending on the committed rate. If the rate of the frames and packets is less than the committed rate, the switch will process the frames and packets in accordance with the in-profile action. Otherwise, the switch will process the frames and packets in accordance with the out-of-profile action.
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Buffalo Americas BS-GS20P Series Switches User Manual, Page 43.

Configure storm settings. If each packet exceeds the threshold configured on this page, exceeded packets will be dropped.

Notice:
If the ingress bandwidth value is lower than the received data threshold on the "Loop Prevention" page, the switch may not be able to detect a loop.

Port	Broadcast	Multicast	DLF	Ingress Bandwidth	Egress Bandwidth
1	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
2	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
3	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
4	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
5	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
6	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
7	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
8	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
9	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
10	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
11	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
12	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
13	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
14	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
15	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps
16	Unlimited ▼	Unlimited ▼	Unlimited ▼	1000 Mbps	1000 Mbps

Apply

Buffalo Americas BS-GS20P Series Switches User Manual, Page 55.

Broadcast	Select a rate to allow passing broadcasts.
Multicast	Select a rate to allow passing multicasts.
DLF	Select a rate to allow passing DLF (destination lookup failure) unicasts.
Ingress Bandwidth	Limits the bandwidth of ingress (input to the switch) speed as the configured value. Note: If the ingress bandwidth value is lower than the received data threshold on the "Loop Prevention" page, the switch may not be able to detect a loop.
Egress Bandwidth	Limits the bandwidth of egress (output from the switch) speed as the configured value.

Buffalo Americas BS-GS20P Series Switches User Manual, Page 55.

26. On information and belief, Defendant's customers deploy the accused products on networks in combination with other products. The specific code portions and modules directed to the infringing functionality will be identified as those systems are made available for inspection and review by Parity Networks.

27. As a result of Defendant's infringement of the '046 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT TWO
INFRINGEMENT OF U.S. PATENT NO. 7,107,352

28. Parity Networks incorporates by reference its allegations in the preceding paragraphs as if fully restated in this paragraph.

29. Parity Networks is the assignee and owner of all right, title and interest to the '352 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

30. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently directly infringing each and every element of at least claim 1 of the '352 Patent, either literally or equivalently, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale methods and articles infringing one or more claims of the '352 Patent. Defendant is thus liable for direct infringement of the '352 Patent pursuant to 35 U.S.C. § 271(a).

31. Exemplary infringing products include Defendant's BS-GS2008, BS-GS2016, BS-GS2024, BS-GS2048, BS-GS2008P, BS-GS2016P, BS-GS2024P & BS-GS2048P Smart Switch, and all associated computer hardware, software and digital content, and all products operating in a substantially similar manner ("352 Exemplary Infringing Products"). The '352 Exemplary Infringing Products use infringing technology including access control lists for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

32. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently indirectly infringing each and every element of at least claim 1 of the '352 Patent, either literally or equivalently, including actively and knowingly inducing infringement of the '352 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Defendant knows or should know infringe one or more claims of the '352 Patent. Defendant instructs and encourages customers to make and use the patented inventions of the '352 Patent by operating Defendant's products in accordance with Defendant's instructions and specifications. Defendant specifically intends its customers to infringe by implementing access control lists for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination.

33. On information and belief, at least since the filing of the Original Complaint, Defendant, without authorization or license from Parity Networks, has been and is presently indirectly infringing each and every element of at least claim 1 of the '352 Patent, including contributory infringement of the '352 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents. Defendant's contributory infringement includes without limitation, Defendant's offer to sell, a component of a product or apparatus for use in a process, that (i) is material to practicing the invention claimed by claim 1 of the '352 Patent, (ii) is not a staple article or commodity of commerce suitable for substantial non-infringing use, and (iii) Defendant is aware or knows to be especially made or especially adapted for use in infringement of the '352 Patent.

34. Defendant instructs and encourages customers to make and use the patented inventions of the '352 Patent by operating the access control list software components of its products in accordance with its instructions and specifications. Defendant specifically intends its customers to infringe by implementing the access control lists software modules in its switches and routers that implement access control lists for filtering and dropping of packets implemented at the ingress port for egress pass/drop determination, as set forth above and in the excerpts from Defendant's technical manuals.

35. Defendant instructs and encourages customers to configure the access control lists and create ingress policies. For example:

ACL

ACL Wizard

Configure ACLs with the wizard. Follow the directions on the screen.

ACL Wizard

ACL Rule

Based on source MAC address ▼

Next

Based on source MAC address	Configure to permit or deny the specified source MAC address.
Based on destination MAC address	Configure to permit or deny the specified destination MAC address.
Based on source IPv4 address	Configure to permit or deny the specified source IPv4 address.
Based on destination IPv4 address	Configure to permit or deny the specified destination IPv4 address.
Based on source IPv6 address	Configure to permit or deny the specified source IPv6 address.
Based on destination IPv6 address	Configure to permit or deny the specified destination IPv6 address.

BS-GS2024P Smart Switch User Manual, Page 63.

IPv4 ACL

Create IPv4 address-based ACLs.

Number of ACLs	
Current Number of Groups	0/126
Current Number of Active Rules	0/126

ACL Group Name	Number of Rules
<input type="text"/>	

BS-GS2024P Smart Switch User Manual, Page 65.

ACL Rule List (Ordered by Priority)

Rule Number	Protocol	Destination IP Address	Destination Mask	Destination Port	Source IPv4 Address	Source Mask
Move Rule						
Move <input checked="" type="radio"/> Before <input type="radio"/> After <input type="text"/> (Rule Number)						
<input type="button" value="Move"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>						

ACL Rule Configuration

ACL Group Name: 3

Protocol: Any (0-255)

Destination IPv4 Address: Any Address: Mask: (Example: 0.0.0.0)

Destination Port: Any (0-65535)

Source IPv4 Address: Any Address: Mask: (Example: 0.0.0.0)

Source Port: Any (0-65535)

Service Type:
 ☒ Any
 ☐ IP DSCP (0-63)
 ☐ IP Precedence (0-7)
 ☐ IP ToS Bits Mask: (00-FF)

ACL Action

Permit/Deny: Permit

Egress Queue: None

BS-GS2024P Smart Switch User Manual, Page 65.

Permit/Deny	<p>Select if the frames that satisfy the requirement can be forwarded to the other port or not.</p> <p>Permit Forwards the incoming frames to the other port. Any packets or frames out of the range of permitted IP addresses will be dropped.</p> <p>Deny Drops the incoming frames.</p>
Egress Queue	<p>Apply the scheduling to the frames satisfy the requirement and configure the priority. Select the priority from 0 (lowest) to 7 (highest). The scheduling is executed based on strict or WRR. It depends on the settings on the [Advanced] - [QoS] page. If QoS is disabled, it will be based on WRR.</p>

BS-GS2024P Smart Switch User Manual, Page 67.

Destination IPv6 Address/ Subnet Mask	Configure the filtering rule based on the frame's destination IPv6 address. For instructions on how to enter the address, refer to "About Address and Mask" section below.
Source IPv6 Address/ Subnet Mask	Configure the filtering rule based on the frame's source IPv6 address. For instructions on how to enter the address, refer to "About Address and Mask" section below.

BS-GS2024P Smart Switch User Manual, Page 67

36. On information and belief, Defendant's customers deploy the accused products on networks in combination with other products. The specific code portions and modules directed to the infringing functionality will be identified as those systems are made available for inspection and review by Parity Networks.

37. As a result of Defendant's infringement of the '352 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

VI. JURY DEMAND

38. Plaintiff Parity Networks demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

VII. PRAYER FOR RELIEF

WHEREFORE, Parity Networks prays for judgment and seeks relief against Defendant as follows:

- A. That the Court determine that one or more claims of the Patents-in-Suit is infringed by Defendant, either literally or under the doctrine of equivalents;
- B. That the Court award damages adequate to compensate Parity Networks for the patent infringement that has occurred, together with prejudgment and post-judgment interest and costs, and an ongoing royalty for continued infringement; and
- C. That the Court award such other relief to Parity Networks as the Court deems just and proper.

DATED: April 9, 2021

Respectfully submitted,

/s/ Andrew G. DiNovo

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